



Research Article

AGRICULTURAL VALUE CHAIN FINANCE: A CASE STUDY OF ABC FINANCIAL INTERMEDIATION AND SERVICES PVT. LTD IN GUJARAT

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Abstract: The study was conducted to analyze the value chain finance of ABC Intermediation and Services Pvt. Ltd. It has covered Ahmedabad region of Gujarat state consisting of 5 talukas. For this study, 60 traders and 10 processors were selected based on purposive sampling technique. Both primary as well as secondary data were used to achieve the stipulated objective of the study. Primary data were collected with the help of structured schedule. Descriptive statistics and Garrett ranking were applied to achieve the stipulated objective of the study. The most of the traders were dealing with cereals and they procure the cereals from farmers on cash basis and sell it to processors on credit basis. Here, traders have to give payment to farmer on the same day of purchase but he receives the finance from processors after 10 to 15 days of selling. So, brokers and traders require finance for 10 to 15 days to run their business effectively. Processors procure cereals from APMC and from some farmers on direct basis also. Traders purchase agri produce from farmers at prevailing price in the market but, they sell the agri produce to the processor at different price which includes the procurement price, commission (here in this case average 1.5%), market access, labour charge for loading and unloading the produce.

Keywords: Agricultural value chain, Agri-Finance, Processors, Traders

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Introduction

Agriculture in India has market-based economic development potential which can bring benefits through national or regional value chains. The value chain of finance offers an opportunity to expand funding opportunities for agriculture, improve efficiency and finance repayments, and consolidate value chain linkages between chain participants. The specific opportunities that funding can create within the chain are driven by the context and business model and the relative roles of each participant in the chain. Nyoro (2007) stated that 'value chain actors are driven more by the desire to expand markets than by the profitability of finance.' Traders, for example, often use finance as a procurement facility, while input suppliers often use it as part of a sales incentive strategy. For financial institutions, it offers a lower risk and cost approach to the provision of financial services.

Objectives of The Study

- To study the opportunities for ABC finance and examine its client
- To find out requirements and challenges in financing

Material and methods

Sampling Procedure

The study was conducted in ABC Finance and its operational area Ahmedabad District of Gujarat state. From the clients of the firm 60 traders and 10 processors were selected through simple random sampling from the list of existing customers. Both primary and secondary data were used to achieve the stipulated objective of the study. For this study purpose primary survey was conducted with help of prepared schedule. The selection of the Ahmedabad district for the study done on the basis of acreage under wheat and rice crop cultivation and whatever quantity of crop arrival in APMC(Agricultural Produce Marketing Committee) with the help of time series data of last three year from 2014-2015 to 2016-2017.

With the limitation of the time period for the survey five major taluka selected on the basis of area under cultivated of wheat and rice and total quantity arrival in APMC. From the secondary data we found that the good potential for the agri value chain business in the study area. As well as in that area ABC already do work in the same area and they want to expand their business and the rice mill are more available in the Ahmedabad region.

Analytical Procedure

Tabulated analysis and graphical presentations have been used to effective presentation of data.

Percentage: A percentage is a number or ratio expressed as a fraction of 100.

Frequency $\times 100$ Total sample size

Garrett's Ranking Technique

- First stage: Ranking given by respondents for each attribute was analyzed.
- Second stage: Thus, ranks assigned by the individual respondents were converted into percent position value by using the formula.
- Percent position= $100(R_{ij}-0.5)/N_j$
- Where, R_{ij} stands for rank given for i th factor by the j th individual. N_j stands for numbers of factors ranked by j th individual.
- Third stage: for each percent position scores were obtained with reference to Garrett's ranking conversation Table and each percent position value was converted into scores by reference to Garrett's Table.
- Fourth stage: Summation of these scores for each factor was worked out for the numbers of respondents who ranked for each factor. Mean scores were calculated by dividing the total score by the numbers of respondents.
- Fifth stage: overall ranking was obtained by assigning ranks 1, 2, 3 and 4 in the descending order of the mean score.

Result and Discussion

Approach for financing of ABC Finance

In other usual forms of agri finance, whether internal financing within the value chain, such as traditional trader credit, or financing originating externally, such as banking finance, MFI (Micro Finance Institution) lending etc, the view of the overall activity that the borrower is engaged in, is less comprehensive, and therefore encompasses significant risk. The additional risk is due in large part to uncertainty; not being able to fully understand the risks and consequently not being able to assess and mitigate against those risks. Under ABC Value Chain Finance approach, the decisions about financing are based on the health of the entire value chain, including market demand, and not just on the financial health of the individual borrower. This means that in order to offer value chain-based finance, knowledge of the agricultural system is required.

ABC caters to the following needs of different value chain actors

Input suppliers – providers of feeds, fertilizers, chemicals, agri equipment etc. ABC provides them with small, short-term loans for working capital: and long term, Term-loans to expand business. Through its financial relationships with farmers, ABC creates compatible incentives for farmers to buy from empaneled input suppliers thereby mitigating the business risks of suppliers.

Farmers - Farmers, producers and their families manage the crops or animals, and are involved in sowing to post-harvesting activities including marketing.

•For Agri-farmers specifically, a lot of pre-harvest risks can be taken care of by seeking group guarantees or third-party guarantees, and by say, making equipment available through leasing or asset finance. Using these mechanisms, ABC finances the working capital to buy seeds and other inputs and asset loans to buy equipment.

•Also, using the network relation with suppliers, ABC helps farmers procure required supplies, at discounted rates.

•ABC provides access to finance to farmers to purchase livestock/animals or invest in storage spaces and offers them insurance products to protect the assets, price guarantees or derivatives to lock in better revenues.

•For post-harvest activities, ABC provides traders access to short term finance and help farmers avail liquidity using warehouse receipts and other collateralized lending. These products and mechanisms help farmers and traders manage their working capital needs.

Traders play an important market linkage role. They buy produce from the farmers or co-ops and aggregate them before selling them to procurers, processors and marketing firms. ABC through financial intermediation assists traders to manage their working capital flow. It also provides traders access to finance to invest in assets that allow traders to aggregate and store. Processors/Aggregators who buy products in bulk from farmers or traders, are provided working capital loans to allow them to buy the produce. Through ABC, these processors/aggregators can pay farmers and traders electronically. ABC through its customized produce solutions helps, processors/aggregators to invest in or lease out processing equipment.

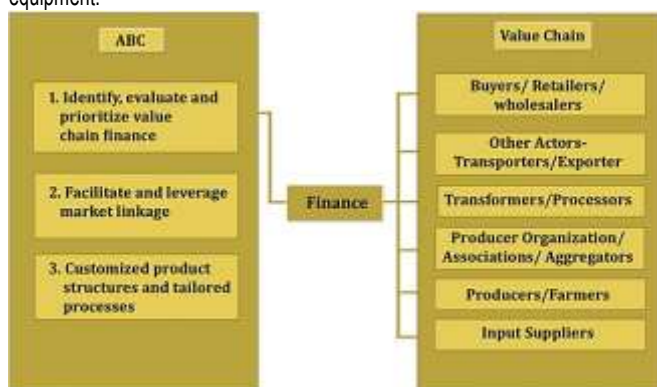


Fig-1 Value Chain Methodology for ABC Finance

As show in [Fig-1], Through tailored value chain solutions based on deeper understanding of the local value chains, ABC helps expand the financing for agri activities and improves efficiency through customized financial solutions.

These customized solutions strengthen or solidify linkages among participants in the chain. It improves the quality and efficiency of financing agricultural chains by:

- Identifying financing gaps existing in the value chain
- Customize financial solutions to fit the needs of the actors in the chain
- Use value chain linkages to mitigate risks of the chain and its partners by structured buy-sell contracts and tri-party agreements
- Establish payment ecosystems to bring in transaction efficiency in the value chains and also reduce financial transaction costs
- Use payment ecosystem to mitigate operations and credit risk by cash flow trapping at source
- Provide risk mitigation tools like insurance to mitigate asset, price and income risk

Agri Value Chain

Farmers in Ahmedabad District sell their paddy and wheat produce in nearby APMC only. Transportation charges for carrying produce to APMC are borne by farmer. Farmer sells their produce to trader through auction process. This process is monitored by executive from APMC and he sets minimum price to start auction process. In this process, traders are the purchaser who purchase on behalf of wheat and paddy processors. Paddy and Wheat processors (mill owners) contact trader in APMC to purchase some amount of paddy and wheat with specified price. This trader takes part in auction and tries to purchase mentioned amount with specified price from other traders in APMC. If farmer comes to sell his paddy and wheat to trader X's shop, and if trader X doesn't have contract with Paddy and wheat processor for purchase then other traders will take part in auction to purchase this Paddy and wheat. Trader X gets 1.25 to 1.5% of amount as a commission.

Following charges are borne by Trader & Processor:

- Transportation charges from APMC to Processor
- Market Access: 0.6% of produce
- Trader Commission: 1.25 - 1.5 %
- Labour charges: Rs. 8 per bag of 30Kg/50Kg

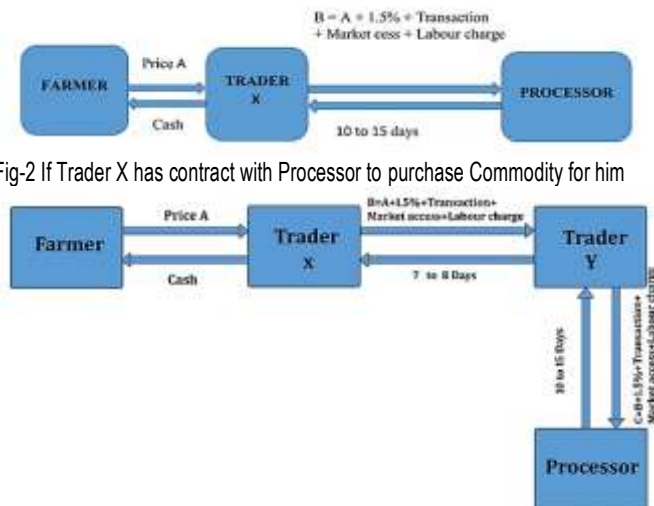


Fig-2 If Trader X has contract with Processor to purchase Commodity for him

Fig-3 If Trader X does not have contract with Processor to purchase Paddy and Wheat for him and Trader Y has

As show in [Fig-2] Trader X acts as an intermediary between Farmer and Processor. This sell happens through auction process. Here, Trader X pays to farmer based on auction price and he will get paid by Processor. Generally, Trader X pays farmer in cash which is dependent on their relationship. In some cases, traders pay farmers after 7 to 8 days also. Processor will pay 1.5% of trader's commission, 0.60% market Access and Rs.8 per Bori as labour charges as well as Price A. As show in [Fig-3], farmer comes to sell his produce to Trader X's shop because of their good relations. Now, auction happens at Trader X's shop and Trader Y purchases this produce from farmer which he will sell to Processor. Here, Trader X pays to farmer in cash and Trader X gets 1.25 to 1.5% as a commission. Trader Y will pay to Trader X after 7 to 10 days and Processor will pay Trader Y after 10 to 15 days.

Table-2 Problems Faced by Traders

Problem	1*94	2*87	3*83	4*81	5*78	Total	Garrett value	Total	Garrett score	Rank
Capacity Building	10	9	10	22	9	60	94	5264	87.33	3
Transportation	11	11	17	12	9	60	87	5307	88.45	2
Lack of infrastructure	9	19	11	10	11	60	83	4897	81.61	4
Finance	18	13	11	9	9	60	81	5427	90.45	1
Market situation	8	9	10	14	19	60	78	4446	74.5	5

Table-4 Problems Faced by Traders Getting Loan from Bank

Factor	1*94	2*87	3*83	4*81	5*78	6*76	Total	Garrett value	Total	Garrett score	Rank
It takes more time	16	11	9	8	9	7	60	94	5922	98.7	1
More paper is Required	11	14	9	9	8	9	60	87	5568	92.8	2
Need to give guarantee	10	9	8	13	11	9	60	83	5229	87.15	3
High interest rate	9	10	12	8	6	5	60	81	4455	74.25	5
Less repayment Period	9	11	14	9	9	8	60	78	4524	75.4	4
Limited amount is disbursed	8	9	11	8	15	9	60	76	4332	72.2	6

It was observed in the operational area that majority of the traders 67% (40) were dealing with cereals which was followed by oilseeds 25% (15) and Fruits and vegetables 8% (5) as shown in [Table-1]. Different activities Involved in the company, 87% (52) of traders purchased agri-products from farmers and sold to processors and local markets, while the remaining 13% (8) process procured agri-products and then sell the primary processed products to local markets and others. Payment mode, 82% (49) of traders makes cash payments, while Only 10% (6) of traders comply with the credit base payment system and the remaining 8 % (5) of traders pay 50 percent cash and 50 percent credit depending on the situation. Time Taken by Traders to Pay Supplier (for cash payment), 25 traders prefers to pay suppliers in 2 days while 18 do same day payment and others take 3 or more days to pay.

Table-1 Commodity Dealing

Commodity	Frequency	Percentage (%)
Cereals	40	67
Oilseed	15	25
Fruit & Vegetable	5	8
Total	60	100

Sell of Agri Produce by Traders, 57% traders sell their agri produce to processors while 28% prefer to sell their agri produce to other local people followed by 15% who sell their agri produce to both processors as well as local people. Time for receiving payment, oil mill owners prefers to pay 53% traders within 11 to 15 days, followed by 25% who get their payment in between 16 to 20 days. 22% traders dealing with local people tend to get their payment within 5-10 days. 70% traders were like to expand their current business activities like procurement and commodities in which they are dealing while 30% deny for doing so.

It was found that 70% traders were like to expand their current business activities like procurement and commodities in which they are dealing while 30% deny for doing so as shown in the [Table-2]. Among those 42 traders who want to expand their business, 32 require finance while remaining has their own fund. Among the 32 traders who want finance for expand their business, 47% wants 5 to 10 lakhs credit while 16% wants 10 to 15 lakh and remaining needs more than that. 59% traders want to expand their business in same commodity but increase procurement quantity, while 28% want to expand their business in different commodity, and remaining want to expand their business in processing the commodity. 85% of traders were getting finance from formal source and remaining 15% were getting finance from informal sources to run their business. Out of 60, only 4 traders were aware about value chain while remaining 56 was not aware about value chain finance. When traders had been asked to rank the problems, they face commonly while doing business, majority of traders said that finance is the main problem faced by them followed by transportation, capacity building, and lack of infrastructure and market condition or situation.

Table-3 Relationship between Commodity dealing & Problem Faced by trader

Problems	Cereals	Oil Seeds	F&V	Grand Total
Capacity Building	12	1	0	13
Transportation	2	1	1	4
Lack of Infrastructure	5	9	0	14
Finance	18	3	2	23
Market situation	3	1	2	6
Grand Total	40	15	5	60

Cereal Traders face financial difficulties while the lack of infrastructure is a problem for oilseed traders as shown in [Table-3]. As shown in [Table-4], the major problems faced by traders while taking loan from bank are more time, they need to get loan and more paper work is required. Due to these issues some traders prefer to use their own fund. Another problem or reason is that they do not get required money timely, followed by minor problems like need to give guarantee (any collateral security), high interest rate as well as less repayment period and limited amount disbursed. There were total 10 processors those were surveyed. All the processors were dealing with cereal processing. It was found that 80% (8) cereal processors procure raw material (here in this case cereal) from traders exist in APMC. Remaining 20% (2) processors procure raw material from both (farmers & traders). All processors deal in domestic market to sell their produce. It was found that 60% (6) processor give payment to their supplier between 11 to 15 days. The processors who deal with farmers and trader also may give payment within 5 days. Only 10% (1) processor takes more than 16 to 20 days to give payment to suppliers. From survey studies, it was found that Majority of the processors want to expand their business by procuring more amount of particular commodity while 40% (4) do not want to expand their business. From survey studies, it was found that out of 6 processors who want to expand their business, 2 of them need credit from external sources while remaining 4 want to expand their business by using their internal or own funds. It was found that 50% (1) processors wants 5 to 10 Lakhs credit and another 50% (1) Processors want 10 to 15 Lakhs credit needed to expand their business smoothly in current position. From survey studies, it was found that 80% (2) processors use formal sources to get finance while 20% (2) processors use informal sources to get finance. From survey studies, it was found that 80% (8) processors who use formal sources to get finance they took loan from bank to run their business while remaining 20% (2) use their own funds to run their business. Survey research showed that only 10 % (1) processors were knew about value chain while remaining 90% (9) of processors do not know the term value chain and value chain finance.

Conclusion

As there is no existence of any other NBFCs (Non-Banking Financial Company) who give finance to value chain actors, ABC has a great opportunity to enter in the market. ABC provides short-term credit funding as APMC traders with short-term loan requirements. The main challenge for ABC is that the interest rate is very high as compared to bank interest. ABC has to make the interest rate more competitive. ABC can focus more on those traders who have more financial need but they can't get it from bank because bank give loan based on their existing business turnover or market value. ABC should focus more on promotional activities and make their lending rate more competitive and focus on increasing their staff and channel partners for better performance.

Application of research: This research is helpful to know about opportunities and challenges for that financial product of ABC.

Research Category: Agribusiness Management

Abbreviations: %- Percentage, APMC- Agricultural Produce Marketing Committee, NBFC- Non-Banking Financial Company, Kg- Kilo Gram, MFI- Micro Finance Institution

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Study area / Sample Collection: Ahmedabad District

Cultivar / Variety / Breed name:

Conflict of Interest: None declared

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Ethical Committee Approval Number: Nil

References

- [1] Angelucci F. and Conforti P. (2010) *Food Policy*, 35, 565–575.
- [2] Singh B. and Vishwajit (1994) *Indian Co-operative Review (April)*, New Delhi.
- [3] Groh V. (2004) *Drumnet project: Technical report to IRDC, mimeo*
- [4] Gereffi G. (1999) *Journal of International Economics*, 48(1), 37-70.
- [5] Gereffi G. (1994) *The Organization of Buyer-Driven Global Commodity Chains: How U. S. Retailers Shape Overseas Production Networks*, in G. Gereffi and M. Korzeniewicz (eds.), *Commodity Chains and Global Capitalism*, London: Praeger.
- [6] Henriksen L., Riisgaard L., Ponte S., Hartwich F. and Kormawa P. (2010) *Agro-food value chain interventions in Asia: A review and analysis of case studies*. Vienna, Austria: UNIDO.
- [7] Rubin D., Tezera S. and Caldwell L. (2010) *A calf, a house, a business of one's own: Microcredit, asset accumulation, and economic empowerment in GL CRSP projects in Ethiopia and Ghana*. Washington, DC, USA: USAID.
- [8] Swinnen J.F. and Maertens M. (2014) *Finance for Food*, 45-65.